UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,532	11/09/2001	Jedrick J. Weldon	09710-1111	5779

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EXAMINER
HYUN, SOON D

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 04/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 February 2003</u> .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-25</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-25</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)		4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .	
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)		5) ☐ Notice of Informal Patent Application (PTO-152)	
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .		6) ☐ Other: .	

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in the last Office action.

Claim Objections

2. Claims 1-3, 14, 18, and 21 are objected to because all instances of "configured to" in each claim should be deleted to make the claim positive. Language such as "adapted to/for", configured to/for", or arranged to/for" (or similar phrases such as "enabled to", "capable of", etc.) Is not considered positive recitation per MPEP 2106.

Claim Rejections - 35 U.S.C. § 103

3. Claims 1-7, 9-20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mirek et al (US 5,878,032) in view of Diebboll et al (US 5,886,643).

Regarding claims 1, 4, 9, and 22, Mirek discloses a system comprising:

a routing engine (Node A) forwards a packet (an ATM cell) to a destination node (Node B) of a communication network (an ATM network), wherein the ATM cell traverses a particular communication path (a selected VPC/VPC in FIG. 1) among a plurality of communication paths (VPC/VCCs) to the node B; and

a probe mechanism (a monitoring mechanism, col. 3, line 66-col. 4, line 6) generates and

send a probe message (a measurement cell) over the VPC/VCC traversed by the ATM cell for

determination statistics (delay, etc) of the communication network.

However, Mirek differs from the claimed invention in that Mirek does not explicitly

disclose that Node A is a router, the network is private (claims 4/22), and that Node A has an

enclosure (claim 22). Diebboll teaches that a probe such as Node A could be part of a router, see

col. 4, lines 45-48. Combining hardware simplifies design and reduces cost. Therefore, it would

have been obvious to one of ordinary skill in the art to include node A as part of a router, as

taught by Diebboll, to simplify design. It is inherent that a router has an engine to forward packets

through a port (claim 1) because that is what a router does. It would have been obvious to one

skilled in the art to declare a network private by making it unavailable to the public and to use an

enclosure, both to increase security and protection.

Mirek further differs from claim 9 in that Mirek does not explicitly disclose software to

send the measurement cell. However, it would have been obvious for one of ordinary skill in the

art to implement a process as software running on, for example, a workstation, to increase

flexibility in future upgrade(s).

Regarding claim 14, Diebboll discloses that a probe could be part of a router (i.e.,

probing router), see col. 4, lines 45-48. Diebboll also discloses a Network Management

System NIVIS that obtains information on traffic, performance, and problems. The NIVIS

includes a report generator, see col. 5, lines 1-11. Diebboll differs from the claimed invention in that Diebboll does not mention a processor to receive probe information. However, such processor is inherent in the NIVIS workstation because a workstation cannot operate without a processor.

Regarding claim 2, Mirek discloses that the probe message is sent at T1 and the probe mechanism receives a reply probe message (a reporting measurement cell) over the VPC/VCC at a second time, T4, sent by the Node B in response to receiving the probe message with a remote latency indicator (delay difference information Tb) therein so that service level agreement characteristics, see col. 4, line 7-col. 5, line 49.

Regarding claim 3, Mirek differs from the claimed invention in that Mirek does not explicitly disclose that the probe mechanism can store service level stats. Diebboll discloses that probes can collect data and maintain statistical information for later analysis, see col. 4, lines 22-34. By having a probe maintaining its collected information, the load on central computing will be reduced. Therefore, to one of ordinary skill in the art, it would have been obvious to have the probes maintaining stats to lessen the central computing load in Mirek.

Regarding claim 5, Mirek discloses a Delay Result field to indicate the time between when Node B receives the measurement cell and when Node B responds, see col. 5, lines 65-67.

Regarding claim 6, Mirek differs from the claimed invention in that Mirek does not

disclose a remotely programmable poling interval. However, Diebboll discloses a system that

periodically polls the probes for data, see col. 5, lines 29-30. Using remotely programmable

settings increases flexibility and reduce cost. Therefore, to one of ordinary skill in the art, it would

have been obvious to remotely set the polling interval, as taught by Diebboll, to increase flexibility

in Mirek.

Regarding claim 7, Mirek discloses that statistics such as round trip delay, cell transfer

delay can be calculated, see col. 5, equations 3-6.

Regarding claim 10, Mirek discloses a value T1 to indicate when a measurement cell

(probe message) is sent from Node A, see col. 4, lines 7-8.

Regarding claim 11, Mirek discloses a value T3 to indicate when a reporting measurement

cell (reply probe message) is sent from Node B (destination probing router), see col. 4, lines

11-12. Node B also sends delay difference information Tb (remote latency indicator), see col. 4,

lines 57-60.

Regarding claim 12, Mirek discloses that statistics such as round trip delay, cell transfer

delay can be calculated, see col. 5, equations 3-6.

Regarding claims 13 and 15, as stated earlier, it would have been obvious to one

skilled in the art to declare a network private by, for example, making it unavailable to the public.

Regarding claim 16, Mirek/Diebboll differ from the claimed invention in that they do not

explicitly say that the router is at a customer premise. However, it would have been obvious to

one of ordinary skill in the art to locate the router in any location that meets requirement,

including, for example, customer premise.

Regarding claim 17, Diebboll discloses that the NIVIS report generator 50 can generate

and display performance and utilization reports, see col. 5, lines 11-15.

Regarding claim 18, Mirek/Diebboll differ from the claimed invention in that they do not

explicitly disclose reporting statistics on an Internet web site. However, it would have been

obvious to one of ordinary skill in the art to communicate information through an Internet web

site because such site can provide quick updates, ready access, and centralization of information.

Regarding claims 19 and 20, Diebboll discloses that the NIVIS can identify all servers

talking to a node (topology information) and periodically poll the probes for data, see col. 5, lines

25-30.

Regarding claim 23, refer to the discussion for the claims 1 and 2. The destination Node B

is a predetermined location and the Node B is reachable via any one of the plurality of VPC/VCCs

by selecting a VPC/VCC.

4.   Claims 8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Mirek et al (US 5,878,032) in view of Diebboll et al (US 5,886,643) and prior art

acknowledged by Applicant on page 2 of the specification.

Mirek/Diebboll determine all traffic, including losses between two nodes, see Diebboll,

col. 5, lines 25-29 and 63-66.

However, Mirek/Diebboll differ from the claimed invention in that they do not explicitly

disclose determining availability or loss rate. However, as Applicant correctly points out on page

2, lines 10-12, of the specification, availability is a typical metric. Availability has been widely

used to determine basically whether a resource is reliable enough to meet requirement.

Therefore, to one of ordinary skill in the art, it would have been obvious to determine the

availability in the system of Mirek/Diebboll to see if such network can meet required reliability.

Response to Arguments

5.   Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Mirek et al (US 5,878,032) in view of Diebboll et al (US 5,886,643) and Bell et al (US

6,446,200).

Regarding claim 24, refer to the discussion for claim 23. Diebboll further discloses that the

nodes communicates with each other over network using the TCP/IP (col. 3, line 67-col. 4, line

6). Therefore, the probe message of the Mirek/Diebbol as discussed above could be generated in a

network layer according to an Internet Protocol and the plurality of communication paths are

established between the Node A (a source router) and a destination router (Node B) that is

associated with the predetermined location.

However, Mirek/Diebboll does not explicitly teach the probe message according to the IP

transfers via an ATM network. Ball et al discloses a monitoring system for collecting network

parameters, wherein the system monitors IP data over an ATM network.

Those of skill in the art would have been motivated by Ball et al to monitor data generated

according to the IP via an ATM network. Therefore, it would have been obvious to one having

ordinary skill in the art to incorporate the concept of the IP over ATM of Ball et al into

Mirek/Diebboll for monitoring data generated according to the IP.

Regarding 25, it is inherent that each IP datagram generated according to the IP has

source IP address and destination address that identifies the communication path that transports

the data packet.

Response to Arguments

6.   Applicant's arguments filed 02/24/203 have been fully considered but they are not

persuasive.

Applicant argues that Mirek et al does not employ multiple communication paths to reach

Node B and Node B is not reachable from Node A by any other VPC/VCC connections for

transmissions of the OAM cells. The Examiner does not agree. As discussed above, there are a

plurality of VPC/VCC between Node A and Node B as long as the path is not a dedicated path.

Furthermore, with reference to the FIG. 1, the selected VPC/VCC means that a particular

VPC/VCC is selected among a plurality of VPC/VCCs.

Applicant further argues that the secondary reference of Diebbol et al teaches only a

connection-less router, thus there can be no reasonable expectation of combination. The Examiner

does not agree. With reference col. 4, lines 8-9, a connection-oriented protocol could be used in

the Diebbol et al.

For the reasons discussed above, the Examiner believes that the claim rejection is proper.

Conclusion

7.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office

action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is

reminded of the extension of time policy as set forth in 37 CAR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CAR

1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

will the statutory period for reply expire later than SIX MONTHS from the date of this final

action.

8.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Soon-Dong Hyun whose telephone number is (703) 305-4550. The

examiner can normally be reached on Monday-Friday from 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Chau Nguyen, can be reached on (703) 308-5340.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the Group receptionist whose telephone number is (703) 305-3900.

9.   Any response to this final action should be mailed to:
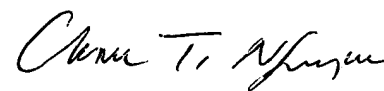
Box AF

        Commissioner for Patents

        Washington, D.C. 20231

Or faxed to: 703-872-9314 for formal communications intended for entry with a label of

"EXPEDITED PROCEDURE" for informal or draft communications with a label of

"PROPOSED" or "DRAFT" (attn: Art Unit 2663, Soon-Dong Hyun).

S. Hyun

04/10/2003

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SUPERVISORY PATENT EXAMINER
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